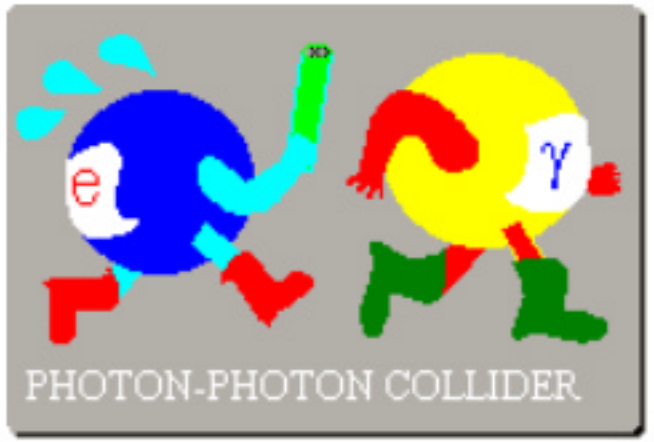
γγ, e-γ, e-e- options



Isamu Watanabe (Akita Keizaihoka Univ.)

2nd LC Physics Study Group Meeting @ KEK

October 3rd 2003

We had

a **Subgroup Meeting** on **5th Sept. 2003** @ KEK

Participants:

E. Asakawa (KEK)

N. Okada (KEK: New Physics convener)

T. Takahashi (Hiroshima)

T. Tauchi (KEK)

I. Watanabe (Akita Keihou)

S. Yamashita (ICEPP, Tokyo: Higgs convener)

Y. Yasui (KEK: Higgs convener)

+ T. Kon (Seikei) send a message on e-mail

Minutes:

1. Summaries on current status of

    1.1 gg **subgroup**

    1.2 Collaboration with '**Beam Physics Club**'

    http://home.hiroshima-u.ac.jp/ogata/index.html

    1.3 **Foreign activities** on γγ

    1.4 **Higgs** & **New Physics** subgroups on γγ physics

2. Reports on current studies of **each member**

3. Discussion on **future activities**

Our activities (incl. future plan):

- **Higgs CP** & **A/H separation** at γγ→A/H→tt in multi-Higgs models (Asakawa)
- **Higgs triple coupling** at γγ→H→HH in SM (Higgs subgroup)
- **Higgs triple coupling** at γγ→H→hh in 2DHM (Watanabe+Ochanomizu)
- **Top-Yukawa** at γγ→H→tt in SM (Higgs subgroup)
- **Large extra-dimension** at γγ→γγ/WW (New Physics subgroup)
- **Non-commutative QED** (Kon+Kamoshita)
- Necessity of **energy scan** (Tauchi)
- **Generator** development for gg→**H** (Takahashi)
- **1-loop calculation** of gg**H vertex** by **GRACE** (Kon)
- **1-loop calculation** of 2-body processes by **GRACE-SUSY** (Kon)
- gg **luminosity generator/library** for **GRACE** based on **CAIN** (Kon+Takahashi)

Discussions:

- $\gamma\gamma$/$e\gamma$ luminosity library for GRACE should be developed

  ← Absolutely necessary to engage
  collaborations with other physics subgroups

- Results should be distributed for public on Web

  ← Needs a new Homepage/account
  which is managed by a FEW subgroup leaders
  to share the tasks of homepage management

  → We asked to Miyamoto-san

- QCD should be cared (not only for $\gamma\gamma$/$e\gamma$ but also for e^+e^-)